

Technical Service Bulletin:
TSB180166

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Simultaneous Knock Fault Codes on All Six Cylinders

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Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

Product Affected

Engines:

- ISX12 G CM2180 EJ
- ISL G CM2180

Issue

Symptom:

- Low power
- · Intermittent amber and/or red check engine lamp
- Either:
 - Knock Data Valid But Above Normal Operating Range Most Severe Level,
 Fault Codes 561, 562, 563, 564, 565, and 566.
- And/or:
 - Knock Data Valid But Above Normal Operating Range Moderate Level, fault codes 2431, 2432, 2433, 2434, 2435, and 2436.

Root Cause:

Internal malfunction of the knock control chip in the engine control module (ECM) causing intermittent false knock signal on all six cylinders simultaneously. Malfunction usually occurs when the engine is warm, logging all six cylinder knock fault codes either moderate, severe, or both.

Verification

Using INSITE™ electronic service tool: Verify that knock fault codes for all six cylinders have the same time stamp. See Figure 1 below.

Sr. Fault Status Counts Description First Lamp No Codes Engine Cylinder 3 (A2) Knock - Data Valid But Above Normal Operating 563 011215:43:35 Inactive Range - Most Severe Level
Engine Cylinder 4 (B2) Knock - Data Valid But Above Normal Operating 564 Inactive 2 011215:43:35 Range - Most Severe Level Engine Cylinder 5 (A3) Knock - Data Valid But Above Normal Operating 3 565 Inactive 2 011215:43:35 Range - Most Severe Level Engine Cylinder 6 (B3) Knock - Data Valid But Above Normal Operating 566 Inactive 2 011215:43:35 Range - Most Severe Level Engine Cylinder 2 (B1) Knock - Data Valid But Above Normal Operating 562 Inactive 2 011215:43:35 Range - Most Severe Level Engine Cylinder 1 (A1) Knock - Data Valid But Above Normal Operating 6 Inactive 2 561 011215:43:35

Range - Most Severe Level

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Figure 1, INSTITE™ View of All Six Cylinders Logging Knock Fault Codes at Same Time.

Resolution

Replace ECM. See corresponding Service Manual. Reference procedure 019-031.

Document History

Date	Details
2018-11-26	Module Created

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